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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BRUCE H. HANSON, HAJIME MORIKAWA,
JASON MCLAUGHLIN, J. EDWARD ROTH, and
MICHAEL WISNIEWSKI

Appeal 2009-000344
Application 10/630,754
Technology Center 3600

Decided: November 3, 2009

Before WILLIAM F. PATE, III, LINDA E. HORNER, and
KEN B. BARRETT, *Administrative Patent Judges*.

BARRETT, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Bruce H. Hanson et al. (Appellants) seek our review under 35 U.S.C. § 134 of the final rejection of claims 1-20. We have jurisdiction under 35 U.S.C. § 6(b).

SUMMARY OF THE DECISION

We AFFIRM.

THE INVENTION

Appellants' claimed invention pertains to a system for sequencing products, such as pieces of mail. Spec. 6, ll. 17-21. The system may be used to place mail pieces in delivery point sequence. *Id.* at 6, ll. 21-23. Claim 1, reproduced below, is representative of the subject matter on appeal.

1. A system for sequencing products, comprising:
 - a plurality of input feeding devices each randomly receiving products from a stream of product;
 - a plurality of output groups corresponding to the plurality of input feeding devices during a first pass phase and a second pass phase, the plurality of input feeding devices feeding the product to a plurality of output bins of the plurality of output groups; and
 - a control having a first mode of operation and a second mode of operation for the first pass phase and the second pass phase, respectively, wherein
 - in the first mode, the control allows all input feeding devices of the plurality of input feeding devices complete access to all output groups of the plurality of output groups during the first pass phase, and
 - in the second mode, the control constrains placement of the products to output groups assigned in the first pass phase such that the groupings of the products to the assigned output groups remain constant between the first pass phase and the second pass phase.

THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

De Leo	US 6,107,588	Aug. 22, 2000
Walach	US 6,274,836 B1	Aug. 14, 2001

The following Examiner's rejections are before us for review:

1. Claims 1-20 are rejected under 35 U.S.C. § 102(b) as being anticipated by De Leo; and
2. Claims 1-20 are rejected under 35 U.S.C. § 102(b) as being anticipated by Walach.

ISSUES

The Examiner found that De Leo anticipates the inventions defined by claims 1-20. Ans. 3-7, 12-19. Appellants contend that De Leo fails to disclose the recited output groups and the consistency of the groupings between the first and second sorting passes. *See, e.g.*, App. Br. 9. Thus, the issues on appeal include:

Have Appellants shown that the Examiner erred in finding that De Leo discloses the claimed output groups?

The Examiner also found that Walach anticipates claims 1-20. Ans. 7-11, 19-23. Appellants argue that Walach does not disclose a stream of product supplying the input feeding devices. *E.g.*, App. Br. 18. Appellants also argue that Walach discloses dividing the articles approximately equally between two bins, and therefore fails to disclose input devices randomly receiving products. *E.g., id.* Appellants further argue that Walach does not

disclose four input feeding devices as recited in claim 11. *Id.* at 20. Thus, two other issues on appeal are:

Have Appellants shown that the Examiner erred in finding that Walach discloses randomly receiving products from a stream of product?

Have Appellants shown that the Examiner erred in finding that Walach discloses four input feeding devices?

FINDINGS OF FACT

We find that the following enumerated findings are supported by at least a preponderance of the evidence.

1. Ordinary meanings of the word “contiguous” are touching, nearby, and adjacent. WEBSTER’S II NEW RIVERSIDE UNIVERSITY DICTIONARY (1984).
2. An ordinary meaning of “stream” is “[a] steady flow or succession.” *Id.*
3. Appellants’ Specification describes the embodiment of Figure 1 as having contiguous output bins 106. Spec. 7, l. 20 - 8, l. 7. Figure 1 depicts an embodiment where all of the output bins 106 assigned to a particular output group (one of the output groups 106a, 106b, 106c, and 106d) are located together such that no bin from another group is in the area occupied by the particular group. Although Figure 1 does not depict the individual bins, the figure suggests that the bins assigned to a particular group are located adjacent to each other.
4. Appellants’ Specification does not provide a definition for the term “stream.”

5. De Leo discloses a method of sorting postal objects using a machine with two or more inputs. De Leo, col. 1, ll. 59-63; col. 2, ll. 25-27; Figs. 1a, 1b. De Leo discloses an embodiment in which, in the first phase of sorting, a single input stream F_i is fed to two inputs A and B. *Id.*, col. 2, ll. 32-40. Input stream F_i comprises random postal objects 7 which have been impressed with a code indicating the ultimate destination of the object (*e.g.*, the street address). *See id.*, col. 2, ll. 37-49. Sorter device 17, under the control of electronic unit 22, directs each postal object to a container 20 located at the appropriate output U_i determined by the object's code. *Id.*, col. 3, ll. 5-26; col. 4, ll. 34-36. There is a plurality of outputs U_i , and, during the first phase, any output can receive objects from either input. *Id.*, col., 3, ll. 19-21. During this first phase, the objects are sorted by specific location within a postal sub-route P_a or P_b . *Id.*, col. 3, l. 55 – col. 4, l. 14. Each sub-route corresponds to a respective zone (zone A or zone B) of a city or a generic place. *Id.*, col. 3, ll. 55-59. During the first pass, the items are sorted such that a particular container 20 at an output U_i contains only zone A items or only zone B items. *Id.*, col. 3, l. 66 – col. 4, l. 14; fig. 1a. After this first phase, the containers 20 are removed from the machine by forming two collections, C_a and C_b , of groups of postal objects, each of which is related to the respective sub-route P_a or P_b . *Id.*, col. 4, ll. 41-42. In a next phase, the objects in collection C_a are supplied to input A and then delivered by the sorter device 17 to containers within a subset W_a of the total outputs. *Id.*, col. 5, ll. 6-31; Fig. 1b. Similarly, objects in collection C_b are supplied to input B and delivered to containers at outputs within subset W_b . *Id.* The electronic unit 22 controls the sorter device 17 such that objects 7 can only

be supplied, during this second phase, from an input to outputs of the corresponding subset, i.e. input A can only supply outputs in subset W_a . *Id.*

6. Walach discloses a method for sorting mail using a mail sorting machine. Walach, col. 3, ll. 34-37. Prior to sorting, a multiplicity of articles to be sorted is provided to the input bins of a multi-bin article sorter. *Id.*, col. 3, l. 65 – col. 4, l. 8; *see also id.*, col. 9, ll. 33-35. Walach discloses an embodiment having two input bins where, prior to the first sorting pass, the multiplicity of articles is “divided approximately equally between the two input bins.” *Id.*, col. 7, ll. 8-9.

7. Walach, in comparing the disclosed method with a “conventional” sorting scheme, describes “a case where 300,000 items are to be sorted daily.” Walach, col. 8, l. 65 – col. 9, l. 18. A person of ordinary skill in the art of sorting systems, and particularly one familiar with mail sorting, would understand Walach as disclosing a stream of product supplying input feeding devices.

PRINCIPLES OF LAW

During examination of a patent application, pending claims are given their broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969); *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). It is Appellants’ burden to precisely define the invention, not the United States Patent and Trademark Office’s. *In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir. 1997) (citing 35 U.S.C. § 112, ¶ 2). Appellants have the opportunity to amend the claims during prosecution, and broad interpretation by the Examiner reduces the

possibility that the claim, once issued, will be interpreted more broadly than is justified. *Prater*, 415 F.2d at 1404-05.

In construing the claims, we must be careful not to read a particular embodiment appearing in the written description into the claim if the claim language is broader than the embodiment. *See SuperGuide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004).

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987) (citations omitted).

ANALYSIS

The Rejection of Claims 1-20 under 35 U.S.C. § 102(b) as Being Anticipated by De Leo

Claims 1-6 and 9-12

Appellants argue claims 1-6 and 9-12 as a group. App. Br. 6-11. We select claim 1 as the representative claim, and claims 2-6 and 9-12 stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(vii) (2009).

Claim 1 recites:

in the second mode, the control constrains placement of the products to output groups assigned in the first pass phase such that the groupings of the products to the assigned output groups remain constant between the first pass phase and the second pass phase.

Appellants contend that De Leo does not disclose output groups that remain constant between the two phases. Reply Br. 7. Appellants assert that “‘output groups’ refer to output groups of output bins, and not to groupings of product[.]” *Id.* at 5. Thus, according to Appellants, items placed in a bin

within a group of output bins during the first pass must be constrained to placement in a bin within the same group of bins during the second pass. App. Br. 10. We disagree with Appellants' construction. The pertinent claim language quoted above does not refer to bins but rather recites that "the groupings of the products to the assigned output groups remain constant." Additionally, claim 7, which depends from claim 1, adds the requirement that the same grouping of output bins be maintained between passes, thus further supporting the conclusion that claim 1 does not contain such a requirement. In the context of claim 1, an "output group" is simply a collection of products, *e.g.*, articles of mail corresponding to particular postal routes. *See* Spec. 8, ll. 23-28 ("after the first pass phase, the product may be segregated into groups of 10 routes each[.]").

In support of their construction of the above-quoted claim language, Appellants point to another phrase in claim 1 reciting "the plurality of input feeding devices feeding the product to a plurality of output bins of the plurality of output groups." Reply Br. 3. This phrase does not, as Appellants suggest, tie a specific bin to a specific group but rather indicates that the overall system has a plurality of output bins that comprise a plurality of output groups. Appellants also rely on portions of the Specification describing embodiments of Appellants' invention. *See id.* at 3-5. The cited excerpts of the Specification indicate that several output bins constitute an output group and that, in certain embodiments, the groupings of bins remain constant between passes. *See id.* (quoting excerpts from pages 8, 9, 11, and 12 of the Specification). However, the language of claim 1 is broader than those embodiments having constant bin groupings. Further, the Specification refers to both groupings of bins and groupings of product (*see*

Spec. 8, ll. 1-3), and Appellants' quoted excerpts are not inconsistent with the interpretation of claim 1 as merely requiring that the groupings of products – but not necessarily the groupings of bins – remain constant from the first pass to the second. In other words, claim 1, when given the broadest reasonable construction, does not require that an output group consist of the same output bins during both passes.

De Leo discloses a two-pass sorting process in which a given piece of mail is initially designated as belonging to either zone A or zone B (corresponding to a postal sub-route for a portion of, *e.g.*, a city), and remains in that same zone grouping during the second pass. Fact 5. Thus, Appellants have not shown error in the Examiner's finding (Ans. 13-14) that De Leo discloses "that the groupings of the products to the assigned output groups remain constant between the first pass phase and the second pass phase" as recited in claim 1. Accordingly, we sustain the rejection of claim 1 as anticipated by De Leo, as well as the rejection of claims 2-6 and 9-12 which fall with claim 1.

Claim 7

Claim 7, which depends from independent claim 1, recites: "the control maintains a same grouping of output bins between the first pass phase and the second pass phase." Appellants contend that De Leo does not disclose this feature. App. Br. 11.

The Examiner construes claim 7 as not requiring continuity of the assignment of physical bin locations to specific output groups. Ans. 15. Rather, the Examiner concluded that the claim limitation is satisfied whenever each output bin contains only A or B items after each pass. *Id.*

We disagree. Claim 7, in addition to the product grouping continuity requirement of claim 1, requires that a given output bin be in the same group of bins during both passes. The Examiner does not appear to have found that this situation is disclosed in De Leo. We note that De Leo's Figures 1a and 1b show the bin located at output U_2 containing items from zone B in the first pass but items from zone A in the second pass. Thus, De Leo does not maintain the same grouping for bin U_2 between the two passes as required by claim 7. We are constrained to reverse the rejection of claim 7 as anticipated by De Leo.

Claim 8

Claim 8, which depends directly from claim 1, recites:

the control constrains each of the input feeding devices, on the second pass phase, to feeding product, received from a previously assigned output group maintained from the first pass phase, to a same output group in the second pass phase.

Similar to their arguments concerning claim 1, Appellants suggest that claim 8 requires continuity of bin groupings between passes. App. Br. 12. As discussed above, claim 1 does not require bin grouping continuity, and claim 8 similarly does not require the same grouping of bins in both passes. Claim 8 requires that the control constrain the input feeding devices during the second pass such that a particular product is placed in the same group of products during both passes.

De Leo teaches that, after the first pass, product destined for zone A (objects in collection C_a) are supplied to input A which is constrained by the electronic unit to feed, on the second pass, to only outputs in the corresponding group of outputs, subset W_a . Fact 5. Zone B products are

similarly fed through input B to subset W_b . *Id.* Appellants have not shown error in the Examiner's finding (Ans. 16) that De Leo discloses the controlled grouping recited in claim 8, and we affirm the rejection of that claim.

Claims 13, 15, and 16

Independent claim 13 recites a control assigning contiguous bins to output groups and associating each output group with the respective input feeding device such that the groups remain constant between phases. The Examiner understands the recitation of contiguous bins to refer to the continuity between passes – concluding that, if a given bin after the second pass contains only products from one group, the limitation is satisfied. Ans. 17. The Examiner misunderstands the claim language. Contiguous bins are bins located adjacent to each other. This interpretation is consistent with the ordinary meaning of contiguous, *see* Fact 1, and with the Specification's description of an embodiment of the invention, Fact 13. The Examiner has not explained how De Leo discloses – under the proper construction of “contiguous output bins” – the recited control where predetermined output groups of contiguous bins remain constant between phases. As such, we cannot sustain the rejection of claim 13, or of claims 15 and 16 which depend from claim 13, as anticipated by De Leo.

Claim 14

Appellants address claim 14 under a separate subheading. App. Br. 14-15. Claim 14 depends from independent claim 13, and therefore contains all of the limitations of that independent claim. Because the Examiner has

not demonstrated that claim 13 is anticipated by De Leo, it follows that the Examiner has not shown that all of the limitations of claim 14 are disclosed by the reference. Accordingly, we reverse the rejection of claim 14 as anticipated by De Leo.

Claims 17, 19, and 20

Appellants argue claims 17, 19, and 20 as a group. App. Br. 15-16. We select independent claim 17 as the representative claim, and claims 19 and 20 stand or fall with claim 17.

Appellants argue that De Leo fails to disclose the steps, recited in claim 17, of: 1) feeding each product, in a first pass phase, to an assigned group of bins based on a product code, and 2) assigning each input device to each of the assigned output bin groups. App. Br. 16. Appellants' argument is apparently premised on the erroneous assumption that claim 17 requires continuity of bin groupings between passes. *See id.* Claim 17 does not recite a second pass, but rather includes steps performed in preparation for a second pass. *Compare* claim 17 *with* claim 18 (depending from claim 17, reciting a second pass and a consistency of bin groupings between passes).

De Leo discloses that, during the first pass, postal objects are fed to a bin within the appropriate group, A or B, corresponding to the respective delivery zone. Fact 5. In preparation for De Leo's second pass, objects from the groups of bins are supplied to the corresponding input – zone A items (forming collection C_a) are supplied to input A, and zone B items (collection C_b) are supplied to input B. *Id.* Thus, De Leo discloses feeding products to the appropriate group of assigned bins based on a code (corresponding to a location on a postal route) during the first pass and then

assigning each input device to the assigned group of bins. Appellants have not persuaded us that the Examiner erred in rejecting claim 17 as anticipated by De Leo, and we sustain the rejection of claims 17, 19, and 20.

Claim 18

Dependent claim 18 adds to claim 17 the requirement that, during a second pass, product placement is constrained such that the assigned group of output bins remains constant between the two passes. The Examiner's position regarding this claim is the same as that for claim 7 – that the claim merely requires that a given bin contain only A or B items during either pass but not necessarily the same type of item during both passes. *See* Ans. 19. We disagree. The claim requires that a group of bins assigned to a particular product (based on a product code) maintain that assignment between passes. In other words, bins assigned to the group of zone A bins must remain a zone A bin during both passes. For the reasons discussed above regarding claim 7, the Examiner has not shown that De Leo discloses such a situation. Accordingly, we are constrained to reverse the rejection of claim 18 as anticipated by De Leo.

The Rejection of Claims 1-20 under 35 U.S.C. § 102(b) as Being Anticipated by Walach

Claims 1-10 and 12

Appellants argue claims 1-10 and 12 as a group, App. Br. 17-19, and we select independent claim 1 as the representative claim. Claim 1 recites: “a plurality of input feeding devices each randomly receiving products from a stream of product.” Appellants argue that Walach does not disclose either

a stream of product received by the input feeding devices or that the product is randomly received. App. Br. 18; Reply Br. 10-11.

Appellants' Specification does not provide a definition for the term "stream" and Appellants do not appear to assert that the term has any special meaning in the context of the claimed invention. A stream of product refers to a steady flow or succession of products. *See* Fact 2. Walach discloses a method for sorting mail, and the application of the method in a situation where 300,000 items are sorted daily. Facts 6-7. One of ordinary skill in the art would recognize this teaching of sorting such a quantity of items on a daily basis as a disclosure of a stream of product supplying the input feeding devices.

In support of their randomness argument, Appellants point to Walach's disclosure that "before the first pass, the articles are divided approximately equally between the two input bins." App. Br. 18 (citing Walach, col. 7, ll. 8-9); *see also* Fact 6. Appellants contend that, because the articles are equally divided, the articles are not randomly distributed to the input devices. *Id.* We are not persuaded by Appellants' arguments. The Specification indicates that mail pieces are in random order prior to being sequenced in delivery point order. Spec. 2, ll. 8-10. Because Walach's division occurs prior to the first sequencing pass, the articles are received at the input bins in two approximately equally sized random (unsorted) sets. We note that Appellants' Figure 1 depicts the product stream divided amongst four input feeding devices, while still considered to be received by the input devices in random order. *See* Spec. 7, ll. 20-24; Fig. 1.

Appellants have not shown that the Examiner erred in rejecting claim 1 as anticipated by Walach. We affirm the rejection of claim 1, as well as the rejection of claims 2-10 and 12 which are grouped with claim 1.

Claim 11

Appellants argue that Walach does not disclose that the number of input feeding devices is four, as required by claim 11. App. Br. 20. Appellants note that Walach discloses examples of systems with two input bins and with three input bins, but not a system with four input bins. *Id.* at 20 (citing Walach, col. 7, ll. 3-4; col. 9, l. 1). The Examiner responds that those examples are non-limiting and there could be any number of input devices in Walach's system. Ans. 21. While the Examiner may be correct, we cannot find by a preponderance of the evidence that Walach discloses four input devices. As the claim was rejected under § 102, which requires the disclosure of each claim element, we are constrained to reverse the rejection.

Claims 13-16 and Claims 17-20

Appellants argue claims 13-16 as a group and claims 17-20 as another group. App. Br. 20-22. We select independent claims 13 and 17 as the representative claims. Claim 13 recites a system comprising "a plurality of input feeding devices each randomly receiving products from a stream of product." Method claim 17 recites the step of "providing a plurality of product from a stream of product to any of a plurality of input devices."

Appellants reiterate and incorporate by reference the unpersuasive arguments made concerning claim 1 – that Walach does not disclose input

feeding devices receiving products from a stream of product or randomly receiving product. App. Br. 20-22 (apparently suggesting that the recitation, in claim 17, of providing product to “any” input device requires random distribution). For the same reasons discussed above regarding claim 1, we are not persuaded that the Examiner erred in rejecting claims 13-16 or claims 17-20 as anticipated by Walach.

CONCLUSIONS

Appellants have not shown that the Examiner erred in finding that De Leo discloses the claimed output groups of claims 1, 8, and 17. However, Appellants have shown that the Examiner erred in finding that De Leo discloses the claimed output groups of claims 7, 13, and 18. Accordingly, we sustain the rejection of claims 1-6, 8-12, 17, 19, and 20 as anticipated by De Leo, and reverse the rejection of claims 7, 13-16, and 18 as anticipated by De Leo.

Further, Appellants have not shown that the Examiner erred in finding that Walach discloses randomly receiving products from a stream of product. Accordingly, we affirm the rejection of claims 1-10 and 12-20 as anticipated by Walach.

Lastly, Appellants have shown that the Examiner erred in finding that Walach discloses four input feeding devices. Thus, we reverse the rejection of claim 11 as anticipated by Walach.

DECISION

The decision of the Examiner to reject claims 1-20 is affirmed.

Appeal 2009-000344
Application 10/630,754

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

JRG

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